**Project Design Phase-II**
**Solution Requirements (Functional & Non-functional)**

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|---|---|
| Date | 03 October 2022 |
| Team ID | PNT2022TMID04650 |
| Project Name | SmartFarmer - IoT Enabled Smart Farming Application |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|---|---|---|
| FR-1 | User Registration | Sign Up with help of Gmail and the password as a user |
| FR-2 | User Confirmation | User gets a confirmation Mail once he/she has successfully Signed Up. |
| FR-3 | Login | Login Credentials are checked at the time of Logging in. |
| FR-4 | Dashboard | Once the credentials are checked, dashboard will be visible. It has the details of Atmospheric Temperature, Humidity, Soil Moisture and Motor ON/OFF function. |
| FR-5 | Sensor function | Measure Temperature, humidity and soil moisture. |
| FR-6 | Logout | When user clicked the log out button the user will be signed out. |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | Simplicity in accessing the details of temperature sensor measure, humidity sensor measure and weather conditions by the farmer. Easy controlling of the motor and irrigation system through application. |
| NFR-2 | **Security** | Only the authenticated user can access the irrigation system and monitor the crop. Information of one user will not be shared to the other user or any other persons. |
| NFR-3 | **Reliability** | This crop monitoring, Irrigation control and weather monitoring results in better trade-off between cost and reliability. It reduces time and yields more profit to the farmers. |
| NFR-4 | **Performance** | The concept of integrating sensors with environment, soil and farming parameters will be more efficient for overall supervision. |

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| NFR-5 | **Availability** | The details of all the sensors will be displayed in the application at any time. |
| NFR-6 | **Scalability** | Scalability is an important for IOT platforms. It has been demonstrated that different architectural choices of IoT platforms affect system scalability and that automatic real-time decision making is possible in an environment composed of thousands of devices |